

Application Serial No. 09/383,331
Amendment Dated October 18, 2004
Reply to Office Action dated June 16, 2004

PATENT
Atty. Docket No. 100718.422 US1

REMARKS

By the present Amendment, claims 1, 17, and 26 have been amended. Claim 24 has been cancelled. Accordingly, claims 1-9, 17-23, and 26-31 remain pending in the application. Claims 1, 17, and 26 are independent.

In the Office Action, the Examiner (1) rejected claims 1, 2, 4, 5, 7-9, 17, 18, 20, 21, 23, 24, 26, 27, and 30 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent 5,772,485 issued to Jeng et al. ("Jeng"); (2) rejected claims 1, 2, 4, 5, 8, 17, 18, 20, 21, 24, 26, 27, and 30 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent 6,015,323 issued to Moradi et al. ("Moradi"); (3) rejected claims 3, 19, 28, and 29 under 35 U.S.C. § 103(a) as being unpatentable over Jeng in view of U.S. Patent 6,211,608 issued to Raina et al. ("Raina"); and (4) rejected claims 6, 22, and 31 under 35 U.S.C. § 103(a) as being unpatentable over Jeng in view of U.S. Patent 5,578,485 issued to Huang. Reconsideration and allowance of the application, are requested.

I. §102(b) and (e) Rejections

The Examiner rejected claims 1, 2, 4, 5, 7-9, 17, 18, 20, 21, 23, 24, 26, 27, and 30 under 35 U.S.C. §102(b) as being anticipated by Jeng. The Office Action indicated that Jeng discloses a method of making a cathode assembly of an FED that comprises all of the steps recited in the claims. Claims 1, 2, 4, 5, 8, 17, 18, 20, 21, 24, 26, 27, and 30 were rejected under 35 U.S.C. §102(e) as being anticipated by Moradi. The Office Action indicated that Moradi disclosed a method of making a cathode assembly of an FED that comprises all of the steps recited in the claims. In particular, the Office Action indicates that Jeng and Moradi disclose an FED that includes a resistive layer, an insulative layer, and micropoints as set forth in independent claims 1, 17, and 26. These rejections are respectfully traversed.

As amended, independent claim 1 defines a method of making a cathode assembly of an FED, that comprises, in part:

Application Serial No. 09/383,331
Amendment Dated October 18, 2004
Reply to Office Action dated June 16, 2004

PATENT
Atty. Docker No. 100718.422 US1

...

forming a resistive layer over the emitter electrode structure;

forming an insulative layer on a portion of the resistive layer;

forming at least one micropoint emitter on the substrate and in contact with both the resistive layer and the insulative layer;

...

According to claim 1 of the present application, a method of making a cathode assembly of an FED includes forming a resistive layer over the emitter electrode structure; forming an insulative layer on a portion of the resistive layer; and forming at least one micropoint emitter on the substrate. Further, the micropoint is in contact with both the resistive layer and the insulative layer. Thus, an insulative layer is formed on a portion of a resistive layer, which in turn is formed over the emitter electrode structure. As indicated in the specification (e.g., on page 8) a significant purpose of the insulative layer is to reduce the possibility of shorting between the addressing column line and the row line structure, which shorting might result, e.g., from intrinsic defects in the dielectric structure or unintended variations in spacing between the substrate and grid surfaces.

Jeng and Moradi fail to either disclose or suggest specific features that are recited in independent claim 1. Specifically, these references do not provide "at least one micropoint emitter on the substrate and in contact with both the resistive layer and the insulative layer."

It is therefore respectfully submitted that independent claim 1 is allowable over both Jeng and Moradi.

Claims 2-5 and 7-9 depend from independent claim 1, and are therefore believed allowable for at least the reasons set forth above with respect to independent claim 1.

Independent claim 17 defines a method of making a column line structure for an addressing matrix that comprises, in part:

Application Serial No. 09/383,331
Amendment Dated October 18, 2004
Reply to Office Action dated June 16, 2004

PATENT
Atty. Docket No. 100718.422 US1

...

forming a resistive layer on said conductive structure, wherein the resistive layer is in contact with at least one micropoint emitter formed on a substrate; and

forming an insulative layer partly covering said resistive layer and in contact with the at least one micropoint emitter.

...

Independent claim 26 defines a method of making an FED that comprises, in part:

...

forming a resistive layer over the emitter electrode structure;

forming an insulative layer on a portion of the resistive layer;

forming at least one micropoint emitter on the substrate and in contact with both the resistive layer and the insulative layer;

...

Similar to claim 1, claims 17 and 26 provide micropoint emitters that are formed on the substrate and in contact with both the resistive and insulative layers. As previously indicated with respect to independent claim 1, Jeng and Moradi fail to provide any disclosure or suggestion for such an arrangement.

It is therefore respectfully submitted that independent claims 17 and 26 are allowable over the art of record.

Claims 18-23 and 27-30 depend from independent claims 17 and 26, and are therefore believed allowable for at least the reasons set forth above with respect to independent claims 17 and 26.

Application Serial No. 09/383,331
Amendment Dated October 18, 2004
Reply to Office Action dated June 16, 2004

PATENT
Atty. Docket No. 100718.422 US1

II. § 103(a) Rejections

The Examiner rejected claims 3, 19, 28, and 29 under 35 U.S.C. § 103(a) as being unpatentable over Jeng in view Raina. Claims 6, 22, and 31 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Jeng in view of Huang. These rejections are respectfully traversed.

As previously discussed with respect to independent claims 1, 17, and 26, Jeng fails to disclose specific features that are recited in the claimed invention. More particularly, Jeng does not disclose or suggest micropoint emitters that are formed on the substrate and in contact with both the insulative and resistive layers. The inclusions of Raina or Huang do not remedy this failure by Jeng. There is also no suggestion for this limitation in either Raina or Huang. Therefore, the combinations of Jeng/Raina and Jeng/Huang fail to render the instant claims obvious.

For the reasons stated above, it is respectfully submitted that all of the pending claims 1-9, 17-2 and 26-31) are now in condition for allowance. Therefore, the issuance of a Notice of Allowance is respectfully requested.

The Examiner is respectfully requested to contact the undersigned, if it is believed that such contact would further the examination of the present application.

Application Serial No. 09/383,331
Amendment Dated October 18, 2004
Reply to Office Action dated June 16, 2004

PATENT
Atty. Docket No. 100718.422 US1

AUTHORIZATION

The Commissioner is hereby authorized to charge any additional fees that may be required for this Response, or credit any overpayment, to deposit account number 08-0219.

In the event that an extension of time is required, or which may be required in addition to that requested in a petition for an extension of time, the Commissioner is requested to grant a petition for that extension of which is required to make this response timely, and is hereby authorized to charge any fee for such, to deposit account number 08-0219.

Respectfully submitted,



Leonid D. Thenor
Registration No. 39,397

Wilmer Cutler Pickering
Hale and Dorr LLP
1455 Pennsylvania Avenue, N.W.
Washington, DC 20004
202.942.8400 LDT
Facsimile: 202-942-8484

Date: 18 Oct. 2004